

Prana Medical

A low-cost assisted
respiration device.

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KOMFO ANOKYE
TEACHING HOSPITAL



Ghana

“[The] availability of ventilators is a luxury we only dream about.”

“We have had patients deteriorate just because we couldn’t access... various ventilation accessories.”

“Let’s save lives my friends.
EVERY LIFE MATTERS”

Dr. Alfred Aidoo
Anesthesiology Resident

MAGNITUDE

<2,000

Working ventilators across 41 African countries

vs.

>170,000

Working ventilators in the United States

The New York Times

April 17, 2020

Ventilators Africa needs

700,000 – 1.4 million

RESEARCH



60

Experts we've spoken to

Ghana, Uganda, Tanzania, Cambodia,
Mexico, India, Sri Lanka, Oman, USA, UK

13 Physicians

13 Anesthesiologists

10 Respiratory Therapists

6 Biomedical Engineers

5 Pediatricians

4 Respiratory Care Professors

4 Pulmonologists

3 Intensivists

2 Ops & Supply Chain

PROBLEMS

Capacity

Hospitals are frequently overwhelmed with patients

Doctors send patients away who return when their conditions escalate

Cost

Upfront cost of acquiring a ventilator is very high

60 million Ugandan Shillings (\$17,000) or
40 million Tanzanian Shillings (\$17,250)

Lives

Patients can't afford care so lives are lost

ICU bed from 1 million Ugandan Shillings (\$280) to 5 million Ugandan Shillings (\$1,400) per day

PREVIOUS PROTOTYPES



CURRENT PROTOTYPE



Pressure Control

17	17	17	16
00		00	

Flow Rate Control

0	0	3	3
73		70	

BUSINESS MODEL

Current Expenditure

\$8,000

for oxygen cylinders every month

\$17,000 **×**

for upfront purchase of ventilators

Prana's Subscription Price

\$80–120

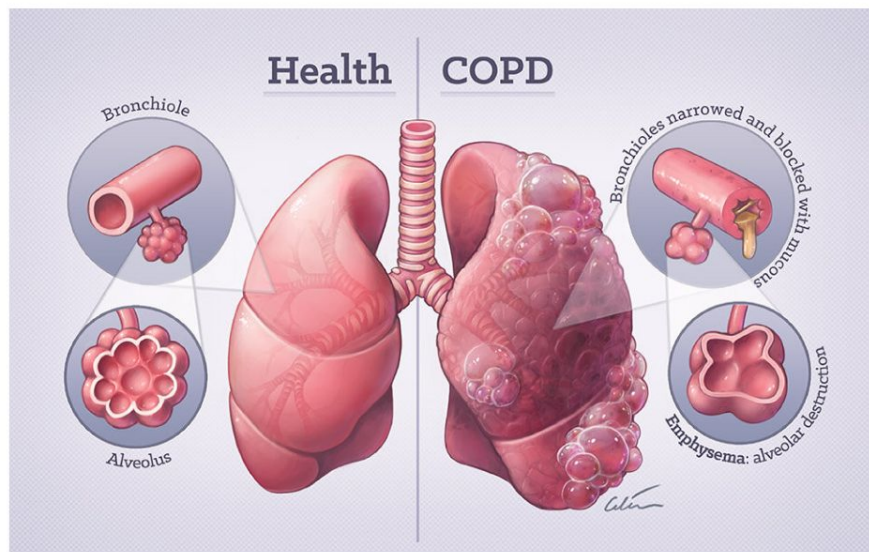
per unit per month

**minimum 24-month commitment*

Includes installation, training, servicing

Similar model to WHOOP

OPPORTUNITY



Chronic Obstructive Pulmonary Disease (COPD)

\$200 Billion

estimated total market size in Africa

26 Million

cases in Africa in 2010 (expected to rise)

TEAM

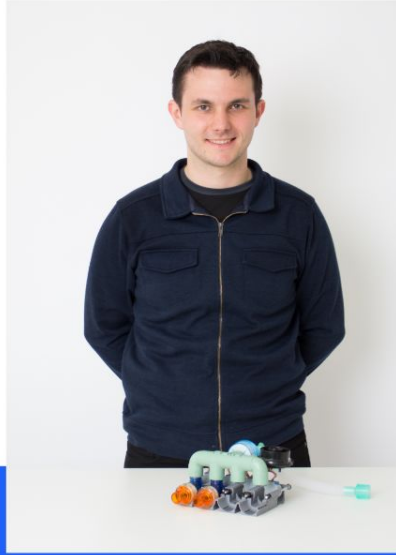


Abhi Ghavalkar

Co-founder & CEO

Master of Design (MDes)
UC Berkeley

BEng (Hons) Product Design Engineering
Loughborough University

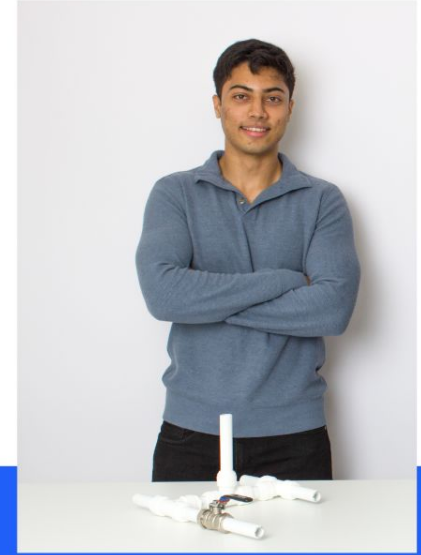


Zach Mudge

Co-founder & CTO

Management Consultant
Kaizen Institute

MEng (Hons) Product Design Engineering
Loughborough University



Akash Ghavalkar

Customer Discovery & Market Research

Operations & Marketing Lead
The Washing Machine Project

BEng (Hons) Chemical Engineering
Loughborough University

ADVISORS & MENTORS



Lisa Trujillo
DHSc, RRT, FAARC

- International Council for Respiratory Care (ICRC)
- American Association for Respiratory Care (AARC)
- Kansas University Medical Center
- Implemented Respiratory Therapy program in Ghana
- Visited Ghana 20+ times to train staff



Gail Gannon
CEO, Ensanté

- Healthcare and business strategy



Bharat Joshi
COO, Ensanté

- Engineering development and roadmap



Brian Daniel
RCP, RRT, Lecturer

- Clinical advice and testing with UCSF Health

Utah Respiratory Therapist Receives Koga Medal for Work in Ghana

Published: December 8, 2016 By: Fernanda Teixeira AARC Members

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The physicians and nurses pictured here were trained to use the Fanem CPAP machine by Trujillo and her colleagues.



AWARDS, ACCOLADES & ACCELERATORS



Winner
Social Impact, 2021



Kansas Respiratory
Care Society
Annual Conference



Finalist
World Changing Ideas, 2021



Student Notable
Health & Wellness, 2021



Finalist
One of 26 out of 352 teams, 2021



Ignite Grant (\$2,000)
One of 5 teams, 2021

HOW IT STARTED & HOW IT'S GOING

